Research in Microbiology

Index 1998 Volume 149

January 1 – December 31

Editorial Offices:

Institut Pasteur, Service des Publications, 75724 Paris Cedex 15

Editions Scientifiques Elsevier

INDEX OF AUTHORS

ABDO, E.-M. — See FREY, J.

AGUADO, C., RUÍZ-HERRERA, J., IRANZO, M., SENTADREU, R. and MORMENEO, S. — Reaggregation and binding of cell wall proteins from *Candida albicans* to structural polysaccharides 327

AGUILAR, A. — See MERINO, S.

Al SUWAIDI, Z. — See MCNERNEY, R.

ANDA, P. — See OTEO, J.A.

ANDRIGHETTO, C., De DEA, P., LOMBARDI, A., NEVIANI, E., ROSSETT, L. and GIRAFFA, G. — Molecular identification and cluster analysis of homofermentative thermophilic lactobacilli isolated from dairy products 631

ARNE, P. — See MARC, D.

ASANO, R.L. and DAVIES, J. — Molecular characterization of the thioredoxin system of *Mycobacterium smegmatis* 567

AUCHER, P. — See JANVIER, B.

AZOULAY-DUPUIS, E., RIEUX, V., RIVIER, C. and TROMBE, M.-C. — Pleiotropic mutations alter the kinetics of calcium transport, competence regulation, autolysis and experimental virulence in *Streptococcus pneumoniae* 5

BACKENSON, P.B. — See OTEO, J.A.

BALDONI, F. — See DI GIOIA, D.

BALMELLI, T. — See GUTACKER, M.

BARBERIO, C. and FANI, R. — Biodiversity of an *Acinetobacter* population isolated from activated sludge 665

BARRAY, S. — See BENSMAIL, L.

BASTIAN, S.N., CARLE, I. and GRIMONT, F. — Comparison of 14 PCR systems for the detection and subtyping of *stx* genes in Shiga-toxin-producing *Escherichia coli*. 457

BATONI, G. — See FREER, G.

BEALL, B. — Two iron-regulated putative ferric siderophore receptor genes in *Bordella bronchiseptica* and *Bordetella pertussis*. . . . 189

BELFAIZA, J. — See BOURSAUX-EUDE, C.

BENSMAIL, L., QUILLET, L., PETIT, F., BARRAY, S. and GUESPIN-MICHEL, J.F. — Regulation of the expression of a gene encoding β-endoglucanase secreted by *Myxococcus xanthus* during growth: role of genes involved in developmental regulation 319

BERÉNYI, M. — See KORÁNYI, P.

BERNADAC, A. — See El KOUHEN, R.

BERNADET, J.-F. — See URDACI, M.C.

BERNASCONI, M.V. — See GUTACKER, M.

BINET, M.R.B. and BOUVET, O.M.M. — Transport of glucose by a phosphoenolpyruvate:mannose phosphotransferase system in *Pasteurella multocida* 83

BLANCO, C. — See JEBBAR, M.

BLANCO, C. — See Le MARREC, C.

BLANCO, J. — See BLANCO, M.

BLANCO, J.E. — See BLANCO, M.

BLANCO, M., BLANCO, J.E., MORA, A. and BLANCO, J. — Prevalence and characteristics of necrotoxigenic *Escherichia coli* CNF1$^+$ and CNF2$^+$ in healthy cattle 47

BOCKMÜHL, J. — See POPOFF, M.Y.

BOECK, B. and SCHINZER, R. — Growth dependence of α-glucan phosphorylase activity in *Thermus thermophilus* 171

BOLLA, J.-M. — See KELLE, K.

BOLSKE, G. — See FREY, J.

BONALY, R. — See RAMANANDRAIBE, E.

BONNASSIE, S. — See JEBBAR, M.

BOOTS, A.P. — See BROK, R.G.P.M.

BOTTAI, D. — See FREER, G.

BOUCHEK-MECHICHE, K., GUÉRIN, C., JOUAN, B. and GARDAN, L. — *Streptomyces* species isolated from potato scabs in France: numeral analysis of "Biotype-100" carbon source assimilation data 653

BOURAS, C. — See GUTACKER, M.

BOURSAUX-EUDE, C., MARGARITA, D., BELFAIZA, J., OLD, I.G. and SAINT GIRONS, I. — Homologues of helicase genes *priA* and *ruvAB* of *Borrelia burgdorferi*, the Lyme borreliosis agent 235

BOUVET, O.M.M. — See BINET, M.R.B.

BOYLE, M.D. — See RAEDER, R.

BRANCACCIO, F. — See GALDIERO, M.

BREE, A. — See MARC, D.

BRENNER, F.W. — See POPOFF, M.Y.

BROADBENT, J.R., OBERG, C.J. and WEI, L. — Characterization of the *Lactobacillus helveticus groESL* operon 247

BROK, R.G.P.M., BOOTS, A.P., DEKKER, N., VERHEIJ, H.M. and TOMMASSEN, J. — Sequence comparison of outer membrane phospholipases A: implications for structure and for the catalytic mechanism 703

BURG, K. — See KORÁNYI, P.

CAMPA, M. — See FREER, G.

CANDRIAN, U. — See GILGEN, M.

CARLE, I. — See DAMIAN, M.

CARLE, I. — See BASTIAN, S.N.

CARVALHO, M.A.R. — See OLIVEIRA, A.A.P.

CASALINO, M. — See PROSSEDA, G.

CELIS-CRUZ, C. — See CORIA-JIMÉNEZ, R.

CHAKROUN, C. — See URDACI, M.C.

CHAMPION, C. — See JEBBAR, M.

CHARBIT, A. — See WANG, J.

CHENG, X. — See FREY, J.

CHETOUI, H., DELHALLE, E., MELIN, P., STRUELENS, M.J., De RYCK, R., OSTERRIETH, P. and De MOL, P. — Typing of nosocomial strains of *Serratia marcescens*: comparison of pulsed-field gel electrophoresis of macrorestriction fragments with biotyping, esterase typing and ribotyping 137

CIUFECU, C. — See DAMIAN, M.

CLAUSSEN, M. and SCHMIDT, S. — Biodegradation of phenol and p-cresol by the hyphomycete *Scedosporium apiospermum* 399

CLOECKAERT, A. — See VERGER, J.M.

COLONNA, B. — See PROSSEDA, G.

CONSTANTINIDOU, C. — See JANVIER, B.

CORIA-JIMÉNEZ, R., ROMERO-OLVERA, J. and CELIS-CRUZ, C. — Superficial hydrophobicity in *Serratia marcescens* strains of clinical origin . . 27

COSTA, J.E. — See OLIVEIRA, A.A.P.

COULON, J. — See RAMANANDRAIBE, E.

CRIADO, M.T. — See GOMEZ, J.A.

DALLA CASA, B. — See FREER, G.

DAMIAN, M., KOBLAVI, S., CARLE, I.,

NACESCU, N., GRIMONT, F., CIUFECU, C. and GRIMONT, P.A.D. — Molecular characterization of *Vibrio cholerae* O1 strains isolated in Romania 745
DAVIES, J. — See ASANO, R.L.
DE DEA, P. — See ANDRIGHETTO, C.
DE MARTINO, L. — See GALDIERO, M.
DE MOL, P. — See CHETOUI, H.
DE PEDRO, M.A. — See MARTÍNEZ-MOYA, M.
DE RYCK, R. — See CHETOUI, H.
DE VRIES, A. — See MEIJER, A.
DECARIS, B. — See FISCHER, G.
DEKKER, N. — See BROK, R.G.P.M.
DEL MAR VITUTIA, M. — See OTEO, J.A.
DELGADO, G. — See RIVADENEYRA, M.A.
DELGADO, R. — See RIVADENEYRA, M.A
DELHALLE, E. — See CHETOUI, H.
DEVALLOIS, A. — See SOLA, C.
DHO-MOULIN, M. — See MARC, D.
DI GIAMBATTISTA, R. — See FENICE, M.
DI GIOIA, D., FAVA, F., BALDONI, F. and MARCHETTI, L. — Characterization of catechol- and chlorocatechol-degrading activity in the *ortho*-chlorinated benzoic acid-degrading *Pseudomonas* sp. CPE2 strain. 339
DI LORENZO, M. — See PROSSEDA, G.
DIJKSHOORN, L. — See SLOOS, J.H.
DOLZANI, L. — See LAGATOLLA, C.
ECHEITA, M.A. and USERA, M.A. — Rapid identification of *Salmonella* spp. phase 2 antigens of the H1 antigenic complex using "multiplex PCR" 757
EL KOUHEN, R., BERNADAC, A. and PAGÈS, J.-M. — COLICIN N and interaction with sensitive *Escherichia coli* cells: *in situ* and kinetic approaches 645
ESCUDERO, R. — See OTEO, J.A.
FALCONI, M. — See PROSSEDA, G.
FANI, R. — See BARBERIO, C.
FARIAS, L.M. — See OLIVEIRA, A.A.P.
FAUCHÈRE, J.L. — See JANVIER, B.
FAURE, D. — See URDACI, M.C.
FAVA, F. — See DI GIOIA, D.
FEDERICI, F. — See FENICE, M.
FENICE, M., SELBMANN, L., DI GIAMBATTISTA, R. and FEDERICI, F. — Chitinolytic activity at low temperature of an Antarctic strain (A3) of *Verticillium lecanii* 289
FERREIROS, C.M. — See GOMEZ, J.A.
FISCHER, G., HOLL, A.C., VOLFF, J.N., VANDEWIELE, D., DECARIS, B. and LEBLOND, P. — Replication of the linear chromosomal DNA from the centrally located *oriC* of *Streptomyces ambofaciens* revealed by PFGE gene dosage analysis. . . 203
FLORIO, W. — See FREER, G.
FORTINA, M.G. — See MORA, D.
FRADIANI, P.A. — See PROSSEDA, G.
FREER, G., FLORIO, W., DALLA CASA, B., BOTTAI, D., BATONI, G., MAISETTA, G., SENESI, S. and CAMPA, M. — Identification and molecular cloning of a novel secretion antigen from *Mycobacterium tuberculosis* and *Mycobacterium bovis* BCG 265
FREY, J., CHENG, X., MONNERAT, M.-P., ABDO, E.-M., KRAWINKLER, M., BOLSKE, G. and NICOLET, J. — Genetic and serological analysis of the immunogenic 67-kDa lipoprotein of *Mycoplasma* sp. bovine group 7 55
GALDIERO, M., BRANCACCIO, F., NAZZARO, C. and DE MARTINO, L.- *Salmonella typhimurium* porin internalization by leukocytes 625
GARCIA MONCO, J.C. — See OTEO, J.A.
GARCÍA-DEL PORTILLO, F. — See MARTÍNEZ-MOYA, M.
GARDAN, L. — See BOUCHEK-MECHICHE, K.
GIAMMANCO, G. — See PIGNATO, S.
GIAMMANCO, G.M. — See PIGNATO, S.
GILGEN, M., HUBNER, P., HOFELEIN, C., LUTHY, J. and CANDRIAN, U. — PCR-based detection of verotoxin-producing *Escherichia coli* (VTEC) in ground beef 145
GIRAFFA, G. — See ANDRIGHETTO, C.
GOMEZ, J.A., CRIADO, M.T. and FERREIROS, C.M. — Cooperation between the components of the meningococcal transferrin receptor, TbpA and TbpB, in the uptake of transferrin iron by the 37-kDa ferric-binding protein (FbpA) 381
GRAYON, M. — See VERGER, J.M.
GRIMONT, F. — See BASTIAN, S.N.
GRIMONT, F. — See DAMIAN, M.
GRIMONT, F. — See MACHADO, J.
GRIMONT, P.A.D. — See DAMIAN, M.
GRIMONT, P.A.D. — See MACHADO, J.
GUÉRIN, C. — See BOUCHEK-MECHICHE, K.
GUESPIN-MICHEL, J.F. — See BENSMAIL, L.
GUTACKER, M., VALSANGIACOMO, C., BALMELLI, T., BERNASCONI, M.V., BOURAS, C. and PIFFARETTI, J.-C. — Arguments against the involvement of *Borrellia burgdorferi* sensu lato in Alzheimer's disease 31
HAKKOU, A. — See RAMANANDRAIBE, E.
HARLEY, V.S. — See MCNERNEY, R.
HODROVA, B., KOPECNY, J. and KAS, J. — Cellulolytic enzymes of rumen anaerobic fungi *Orpinomyces joyonii* and *Caecomyces communis* . . 417
HOFELEIN, C. — See GILGEN, M.
HOFNUNG, M. — See WANG, J.
HOLL, A.C. — See FISCHER, G.
HORGEN, L. — See SOLA, C.
HUBNER, P. — See GILGEN, M.
IRANZO, M. — See AGUADO, C.
JANSSEN, P. — See SLOOS, J.H.
JANVIER, B., CONSTANTINIDOU, C., AUCHER, P., MARSHALL, Z.V., PENN, C.W. and FAUCHÈRE, J.L. — Characterization and gene sequencing of a 19-kDa periplasmic protein of *Campylobacter jejuni/coli* . . 95
JEBBAR, M., CHAMPION, C., BLANCO, C. and BONNASSIE, S. — Carnitine acts as a compatible solute in *Brevibacterium linens* 211
JOUAN, B. — See BOUCHEK-MECHICHE, K.
KAS, J. — See HODROVA, B.
KELLE, K., PAGES, J.-M. and BOLLA, J.-M. — A putative adhesin gene cloned from *Campylobacter jejuni* . . . 723
KITAURA, H. — See TABIRA, Y.
KOBLAVI, S. — See DAMIAN, M.
KOCH, A.L.- Orientation of the peptidoglycan chains in the sacculus of *Escherichia coli*. 689
KOPECNY, J. — See HODROVA, B.
KORÁNYI, P., BURG, K. and BERÉNYI, M. — Stable electrotransformation of symbiont candidate diazotrophic bacterium with plasmids carrying selectable and screenable marker genes 361
KRAWINKLER, M. — See FREY, J.
KREISWIRTH, B. — See VAN LEEUWEN, W.
LAGATOLLA, C., LAVENIA, A., TONIN, E., MONTI-BRAGADIN, C. and DOLZANI, L. — Characterization of oligonucleotide probes for the identification of *Acinetobacter* spp., A *baumannii* and *Acinetobacter* genomic species 3. 557
LAVENIA, A. — See LAGATOLLA, C.
LE MARREC, C., MOREAU, S., LERET, V., SCHÄFFER, A., BLANCO, C. and TRAUTWETTER, A. — Cloning and sequence determination of a ΦAAU2 gene whose product aborts the phage lytic cycle 177
LEBLOND, P. — See FISCHER, G.
LÉONARD, C. and MAHILLON, J. — IS*231A* transposition: conservation versus replicative pathway. . . 549
LERET, V. — See LE MARREC, C.
LETESSON, J.J. — See VERGER, J.M.
LOMBARDI, A. — See ANDRIGHETTO, C.
LOPPINET, V. — See RAMANANDRAIBE, E.
LOYOLA, C. — See MOSCOSO, H.
LUTHY, J. — See GILGEN, M.
M. NOUR. — 16S-23S and 23S-5S intergenic spacer regions of lactobacilli: nucleotide sequence, secondary structure and comparative analysis. . 433
MACHADO, J., GRIMONT, F. and GRIMONT, P.A.D. — Computer identification of *Escherichia coli* rRNA gene restriction patterns 119
MAHILLON, J. — See LÉONARD, C.

MAISETTA, G. — See FREER, G.
MANACHINI, P.L. — See MORA, D.
MARC, D., ARNE, P., BREE, A. and DHO-MOULIN, M. — Colonization ability and pathogenic properties of a *fim*⁻ mutant of an avian strain of *Escherichia coli*. 473
MARCHETTI, L. — See DI GIOIA, D.
MARGARITA, D. — See BOURSAUX-EUDE, C.
MARGUTTI, P., VISCONTI, E., MENCARINI, P., ZOLFO, M., MARINACI, S., TAMBURRINI, E., SIRACUSANO, A. and ORTONA, E. — Typing with internal transcribed spacer regions of *Pneumocytis carinii* from AIDS patients with recurrent pneumonia. . . 595
MARINACI, S. — See MARGUTTI, P.
MARSHALL, Z.V. — See JANVIER, B.
MARTÍNEZ-MOYA, M., DE PEDRO, M.A., SCHWARZ, H. and GARCÍA-DEL PORTILLO, F. — Inhibition of *Salmonella* intracellular proliferation by non-phagocytic eucaryotic cells. . . 309
MATSUMOTO, S. — See TABIRA, Y.
MCNERNEY, R., WILSON, S.M., SIDHU, A.M., HARLEY, V.S., Al SUWAIDI, Z., NYE, P.M., PARISH, T. and STOKER, N.G. — Inactivation of mycobacteriophage D29 using ferrous ammonium sulphate as a tool for the detection of viable *Mycobacterium smegmatis* and *M. tuberculosis*. 487
MEIJER, A., VAN DER VLIET, J.A., SCHOULS, L.M., DE VRIES, A., ROHOLL, P.J.M. and OSSEWAARDE, J.M. — Detection of microorganisms in vessel wall specimens of the abdominal aorta: development of a PCR assay in the absence of a gold standard. 577
MELIN, P. — See CHETOUI, H.
MENCARINI, P. — See MARGUTTI, P.
MERINO, S., AGUILAR, A., RUBIRES, X. and TOMAS, J.M. — Mesophilic *Aeromonas* strains from different serogroups: the influence of growth temperature and osmolarity on lipopolysaccharide and virulence 407
MICHEL, V. — See WANG, J.
MICHELI, G. — See PROSSEDA, G.
MONNERAT, M.-P. — See FREY, J.
MONTEOLIVA-SANCHEZ, M. — See VALDERRAMA, M.J.
MONTI-BRAGADIN, C. — See LAGATOLLA, C.
MORA, A. — See BLANCO, M.
MORA, D., FORTINA, M.G., NICASTRO, G., PARINI, C. and MANACHINI, P.L. — Genotypic characterization of thermophilic bacilli: a study on new soil isolates and several reference strains 711
MOREAU, S. — See LE MARREC, C.
MORMENEO, S. — See AGUADO, C.
MOSCOSO, H., SAAVEDRA, C., LOYOLA, C., PICHUANTES, S. and VASQUEZ, C.- Biochemical characterization of tellurite-reducing activities of *Bacillus stearothermophilus* V 389
NACESCU, N. — See DAMIAN, M.
NAITO, M. — See TABIRA, Y.
NAZZARO, C. — See GALDIERO, M.
NEVIANI, E. — See ANDRIGHETTO, C.
NICASTRO, G. — See MORA, D.
NICOLET, J. — See FREY, J.
NICOLETTI, M. — See PROSSEDA, G.
NICOLI, J.R. — See OLIVEIRA, A.A.P.
NYE, P.M. — See MCNERNEY, R.
OBERG, C.J. — See BROADBENT, J.R.
OHARA, N. — See TABIRA, Y.
OHARA, N. — See TABIRA, Y.
OLD, I.G. — See BOURSAUX-EUDE, C.
OLIVEIRA, A.A.P., FARIAS, L.M., NICOLI, J.R., COSTA, J.E. and CARVALHO, M.A.R. — Bacteriocin production by *Fusobacterium* isolates recovered from the oral cavity of human subjects with and without periondontal disease and of marmosets 585
ORTONA, E. — See MARGUTTI, P.
OSSEWAARDE, J.M. — See MEIJER, A.
OSTERRIETH, P. — See CHETOUI, H.
OTEO, J.A., BACKENSON, P.B., DEL MAR VITUTIA, M., GARCIA MONCO, J.C., RODRIGUEZ, I., ESCUDERO, R. and ANDA, P. — Use of the C3H/He Lyme disease mouse model for the recovery of a Spanish isolate of *Borrelia garinii* from erythema migrans lesions 39
PAGÈS, J.-M. — See EL KOUHEN, R.
PAGES, J.-M. — See KELLE, K.
PARINI, C. — See MORA, D.
PARISH, T. — See MCNERNEY, R.
PENN, C.W. — See JANVIER, B.
PETIT, F. — See BENSMAIL, L.
PICHUANTES, S. — See MOSCOSO, H.
PIFFARETTI, J.-C. — See GUTACKER, M.
PIGNATO, S., GIAMMANCO, G., SANTANGELO, C. and GIAMMANCO, G.M.- Endemic presence of *Salmonella bongori* 48:z35:- causing enteritis in children in Sicily 429
PODBIELSKI, A. — See RAEDER, R.
POPOFF, M.Y., BOCKMÜHL, J. and BRENNER, F.W. — Supplement 1997 (n° 41) to the Kauffmann-White scheme 601
PROSSEDA, G., FRADIANI, P.A., DI LORENZO, M., FALCONI, M., MICHELI, G., CASALINO, M., NICOLETTI, M. and COLONNA, B. — A role for H-NS in the regulation of the *virF* gene of *Shigella* and enteroinvasive *Escherichia coli*. 15
QUESADA, E. — See VALDERRAMA, M.J.
QUILLET, L. — See BENSMAIL, L.
RAEDER, R., WOISCHNICK, M., PODBIELSKI, A. and BOYLE, M.D. — A secreted streptococcal cysteine protease can cleave a surface-expressed M1 protein and alter the immunoglobulin binding properties 539
RAMANANDRAIBE, E., YOUNSI, M., COULON, J., LOPPINET, V., HAKKOU, A. and BONALY, R. — Implication of cell wall constituents in the sensitivity of *Kluyveromyces lactis* strains to amphotericin B 109
RAMOS-CORMENZANA, A. — See RIVADENEYRA, M.A
RAMOS-CORMENZANA, A. — See VALDERRAMA, M.J.
RASTOGI, N. — See SOLA, C.
RIEUX, V. — See AZOULAY-DUPUIS, E.
RIVADENEYRA, M.A., DELGADO, G., RAMOS-CORMENZANA, A. and DELGADO, R. — Biomineralization of carbonates by *Halomonas eurihalina* in solid and liquid media with different salinities: crystal formation sequence. 277
RIVIER, C. — See AZOULAY-DUPUIS, E.
RODOLAKIS, A. — See SIDI BOUMEDINE, K.
RODRIGUEZ, I. — See OTEO, J.A.
ROHOLL, P.J.M. — See MEIJER, A.
ROMERO-OLVERA, J. — See CORIA-JIMÉNEZ, R.
ROSSETT, L. — See ANDRIGHETTO, C.
RUBIRES, X. — See MERINO, S.
RUÍZ-HERRERA, J. — See AGUADO, C.
SAAVEDRA, C. — See MOSCOSO, H.
SAINT GIRONS, I. — See BOURSAUX-EUDE, C.
SANTANGELO, C. — See PIGNATO, S.
SCHÄFFER, A. — See LE MARREC, C.
SCHINZER, R.- See BOECK, B.
SCHMIDT, S. — See CLAUSSEN, M.
SCHOULS, L.M. — See MEIJER, A.
SCHWARZ, H. — See MARTÍNEZ-MOYA, M.
SELBMANN, L. — See FENICE, M.
SEMPLE, K.T. — Heterophic growth on phenolic mixtures by *Ochromonas danica*. 65
SENESI, S. — See FREER, G.
SENTADREU, R. — See AGUADO, C.
SIDHU, A.M. — See MCNERNEY, R.
SIDI BOUMEDINE, K. and RODOLAKIS, A. — AFLP allows the identification of genomic markers of ruminant *Chlamydia psittaci* strains useful for typing and epidemiological studies. 735
SIRACUSANO, A. — See MARGUTTI, P.
SLOOS, J.H., JANSSEN, P., VAN BOVEN, C.P.A. and DIJKSHOORN, L. — AFLP™ typing of *Staphylococcus epidermidis* in multiple sequential blood cultures 221
SOLA, C., HORGEN, L., DEVALLOIS, A. and RASTOGI, N. — Combined numerical analysis based on the

molecular description of *Mycobacterium tuberculosis* by four repetitive sequence-based DNA typing systems 349
STOKER, N.G. — See MCNERNEY, R.
STRUELENS, M.J. — See CHETOUI, H.
TABIRA, Y., OHARA, N., OHARA, N., KITAURA, H., MATSUMOTO, S., NAITO, M. and YAMADA, T. — The 16-kDa α-crystallin-like protein of *Mycobacterium bovis* BCG is produced under conditions of oxygen deficiency and is associated with ribosomes 255
TAMBURRINI, E. — See MARGUTTI, P.
TIBOR, A. — See VERGER, J.M.
TOMAS, J.M. — See MERINO, S.
TOMMASSEN, J. — See BROK, R.G.P.M.
TONIN, E. — See LAGATOLLA, C.
TRAUTWETTER, A. — See LE MARREC, C.
TROMBE, M.-C. — See AZOULAY-DUPUIS, E.
URDACI, M.C., CHAKROUN, C., FAURE, D. and BERNADET, J.-F. — Development of a polymerase chain reaction assay for identification and detection of the fish pathogen *Flavobacterium psychrophilum* 519
USERA, M.A. — See ECHEITA, M.A.
VALDERRAMA, M.J., MONTEOLIVA-SANCHEZ, M., QUESADA, E. and RAMOS-CORMENZANA, A. — Influence of salt concentration on the cellular fatty acid composition of the moderately halophilic bacterium *Halomonas salina* 675
VALSANGIACOMO, C. — See GUTACKER, M.
VAN BELKUM, A. — See VAN LEEUWEN, W.
VAN BOVEN, C.P.A. — See SLOOS, J.H.
VAN DER VLIET, J.A. — See MEIJER, A.
VAN LEEUWEN, W., VAN BELKUM, A., KREISWIRTH, B. and VERBRUGH, H. — Genetic diversification of methicillin-resistant *Staphylococcus aureus* as a function of prolonged geographic dissemination and as measured by binary typing and other genotyping methods 497
VANDEWIELE, D. — See FISCHER, G.
VASQUEZ, C. — See MOSCOSO, H.
VERBRUGH, H. — See VAN LEEUWEN, W.
VERGER, J.M., GRAYON, M., TIBOR, A., WANSARD, V., LETESSON, J.J. and CLOECKAERT, A. — Differentiation of *Brucella melitensis, B. ovis* and *B. suis* biovar 2 strains by use of membrane protein- or cytoplasmic protein-specific gene probes 509
VERHEIJ, H.M. — See BROK, R.G.P.M.
VISCONTI, E. — See MARGUTTI, P.
VOLFF, J.N. — See FISCHER, G.
WANDERSMAN, C. — Protein and peptide secretion by ABC exporters. . . 163
WANG, J., MICHEL, V., HOFNUNG, M. and CHARBIT, A. — Cloning of the *J* gene of bacteriophage lambda, expression and solubilization of the J protein: first *in vitro* studies on the interactions between J and LamB, its cell-surface receptor 611
WANSARD, V. — See VERGER, J.M.
WEI, L. — See BROADBENT, J.R.
WILSON, S.M. — See MCNERNEY, R.
WOISCHNICK, M. — See RAEDER, R.
YAMADA, T. — See TABIRA, Y.
YOUNSI, M. — See RAMANANDRAIBE, E.
ZOLFO, M. — See MARGUTTI, P.

INDEX OF KEY-WORDS

α-Glucan phosphorylase, *Thermus thermophilus,* Glycogen ; Metabolism, Growth cycle 171
ABC; Exporters, Secretion, Proteins, Peptides; Mini-review 163
Acinetobacter baumannii, Oligonucleotide probe, *Acinetobacter*; Identification 557
Acinetobacter, Biodegradation, Sludge; Intraspecific variability, Molecular fingerprinting, ARDRA, RAPD 665
Acinetobacter, Oligonucleotide probe, *Acinetobacter baumannii*; Identification 557
Adhesin, *Campylobacter jejuni*; Pathogenic strains, Gene cloning, Sequence homologies 723
Aeromonas, LPS, Virulence; O serogroups from mesophilic strains, Osmolarity, Growth factors, *Enterobacteriaceae* 407
AFLP, *Chlamydia psittaci* ; Abortion, Epidemiology, Molecular typing, PCR 735
AFLP™, *Staphyloccoccus epidermidis*; Blood culture, Coagulase-negative staphylococci, Strain identification, Epidemiology 221
AIDS, ITS region, *Pneumocystis carinii* sp. f. *hominis*; Biotyping, Reinfection, Epidemiology . . 595
Alzheimer's disease, *Borrelia burgdorferi;* Non-involvement, PCR 31
Amphotericin B, *Kluyveromyces lactis;* Resistance, Cell wall . . . 109
Anaerobiosis, Cellulolysis, Rumen, Endoglucanase, *Caecomyces communis, Orpinomyces joyonii;* Anaerobic fungi, β-glucosidase, YAS . . . 417
Antagonism, *Fusobacterium,* Bacteriocin, Mouth; Anaerobic bacteria, Antagonistic substances, Marmoset 585
ApId, Bacteriophage, *Arthrobacter aureus,* Lytic cycle; ΦAAU2, Early region 177
Arthrobacter aureus, Bacteriophage, Lytic cycle, ApId; ΦAAU2, Early region 177
Atherosclerosis, PCR, DNA; Tissue detection, *Chlamydia pneumoniae,* Cytomegalovirus, Herpes simplex virus 577
Azotobacter vinelandii, Electrotransformation, Plasmid, Electroporation; Marker gene, Chromosomal integration, Symbiosis 361
Bacteriocin, Antagonism, *Fusobacterium,* Mouth; Anaerobic bacteria, Antagonistic substances, Marmoset 585
Bacteriophage lambda, J protein, LamB protein; Interactions, Mutations, Tail fibre 611
Bacteriophage, *Arthrobacter aureus,* Lytic cycle, ApId; ΦAAU2, Early region 177
Bacteriophage, Tuberculosis, Mycobacteriophage D29; Diagnosis, Latent period 487
BCG, *Mycobacterium bovis,* Ribosome, O_2; α-Crystallin-like stress protein, Ribosomal binding protein, O_2 deficiency 255
BCG, *Mycobacterium tuberculosis,* Protein SA-5K; Secretion antigens, Molecular cloning 265
bfrB gene, *Bordetella bronchoseptica,* Iron, *bfrC* gene; Fur-repressed genes, TonB-dependent receptors, Tn*phoA* mutagenesis, Regulation 189
bfrC gene, *Bordetella bronchoseptica,* Iron, *bfrB* gene; Fur-repressed genes, TonB-dependent receptors, Tn*phoA* mutagenesis, Regulation 189
Biodegradation, *Acinetobacter,* Sludge; Intraspecific variability, Molecular fingerprinting, ARDRA, RAPD 665
Biodegradation, *Ochromonas danica,* Phenol; Cresols, Xylenols, Phenolic mixtures 65
Biodiversity, Evolution, *Mycobacterium tuberculosis;* DNA fingerprinting, IS*6110*, Spoligotyping, Combined numerical analyisis . . . 349
Biomineralization, Crystal, *Halomonas eurihalina;* Halophilic bacteria, Carbonates 277
Bordetella bronchoseptica, Iron, *bfrB* gene, *bfrC* gene; Fur-repressed genes, TonB-dependent receptors, Tn*phoA* mutagenesis, Regulation 189
Borrelia burgdorferi, Alzheimer's disease; Non-involvement, PCR 31
Borrelia burgdorferi, Helicase, Gene *priA*, Gene *ruvAB*; Telomere, Replication, Recombination, Primosome 235
Borrelia garinii, Lyme disease, Erythema migrans; C3H/He mice, Isolation, Spain 39
Brevibacterium linens, Carnitine; Gly-

cine betaine, Ectoine, Stress osmotique, Osmoprotection 211
Brucella, DNA; Gene restriction patterns, Nucleic probes, Typing, Taxonomy 509
Caecomyces communis, Cellulolysis, Anaerobiosis, Rumen, Endoglucanase, *Orpinomyces joyonii;* Anaerobic fungi, β-glucosidase, YAS 417
Calcium, Virulence, *Streptococcus pneumoniae;* Transport, Genetic exchanges, Autolysis 5
Campylobacter coli, Enteritis, *Campylobacter jejuni,* Cell wall; Periplasmic protein p19, Gene sequencing 95
Campylobacter jejuni, Adhesin; Pathogenic strains, Gene cloning, Sequence homologies 723
Campylobacter jejuni, Enteritis, *Campylobacter coli,* Cell wall; Periplasmic protein p19, Gene sequencing 95
Candida albicans, Cell wall; Protein aggregation, Polysaccharide/protein interactions 327
Carnitine, *Brevibacterium linens;* Glycine betaine, Ectoine, Stress osmotique, Osmoprotection 211
Catechol, Chlorobenzoic acid, Chlorocatechol, *Pseudomonas;* Biodegradation, Catabolic genes . . 339
Cattle, CNF, *Escherichia coli;* NTEC infections, Reservoirs, Serogroups 47
Cell wall, *Candida albicans;* Protein aggregation, Polysaccharide/protein interactions 327
Cell wall, Enteritis, *Campylobacter jejuni, Campylobacter coli;* Periplasmic protein p19, Gene sequencing 95
Cell wall, Peptidoglycan, *Escherichia coli,* Murein, Sacculus; Models, Orientation, Elongation, Glycan chains, Tessera, Disaccharide pentapeptides; Review 689
Cellulolysis, Anaerobiosis, Rumen, Endoglucanase, *Caecomyces communis, Orpinomyces joyonii;* Anaerobic fungi, β-glucosidase, YAS. . . . 417
Child, Diarrhoea, *Salmonella bongori;* Italy, Serovar 48:z35:-, Reptiles 429
Chitin, *Verticillium lecanii, Trichoderma harzianum;* Low temperature, Chitinolytic activity, Antifungal action 289
Chlamydia psittaci, AFLP; Abortion, Epidemiology, Molecular typing, PCR 735
Chlorobenzoic acid, Catechol, Chlorocatechol, *Pseudomonas;* Biodegradation, Catabolic genes . . 339
Chlorocatechol, Chlorobenzoic acid, *Pseudomonas;* Biodegradation, Catabolic genes 339
Cholera, *Vibrio cholerae;* Toxin, Ribotyping, PCR, Molecular characterization, Romania 745
CNF, *Escherichia coli,* Cattle; NTEC infections, Reservoirs, Serogroups 47
Colicin N, *Escherichia coli,* Porin; OmpF, Immunocytolocalization, Outer membrane, K^+ 645
Colonization, *Serratia marcescens,* Hydrophobicity; Pathogenicity, Mexico 27
Cresol, Hyphomycete, *Scedosporium apiospermum,* Phenol; Aromatic pollutants, Biodegradation, *p*-Cresol, *ortho*-Pathways 399
Crystal, *Halomonas eurihalina,* Biomineralization; Halophilic bacteria, Carbonates 277
Cysteine, IgG, Virulence, *Streptococcus pyogenes,* Protease, M protein; IgG subclasses, M1 antigen . . 539
Diarrhoea, Child, *Salmonella bongori;* Italy, Serovar 48:z35:-, Reptiles. 429
DNA, Atherosclerosis, PCR; Tissue detection, *Chlamydia pneumoniae,* Cytomegalovirus, Herpes simplex virus 577
DNA, *Brucella;* Gene restriction patterns, Nucleic probes, Typing, Taxonomy 509
EC 3.1.1.32, Outer membrane, Phospholipase A, *pldA* gene; Active site, Catalysis 703
Electroporation, Electrotransformation, *Azotobacter vinelandii,* Plasmid; Marker gene, Chromosomal integration, Symbiosis 361
Electrotransformation, *Azotobacter vinelandii,* Plasmid, Electroporation; Marker gene, Chromosomal integration, Symbiosis 361
Endoglucanase, Cellulolysis, Anaerobiosis, Rumen, *Caecomyces communis, Orpinomyces joyonii;* Anaerobic fungi, β-glucosidase, YAS 417
Endoglucanase, *Myxococcus xanthus;* Extracellular enzymes, Regulation. 319
Enteritis, *Campylobacter jejuni, Campylobacter coli,* Cell wall; Periplasmic protein p19, Gene sequencing 95
Erythema migrans, *Borrelia garinii,* Lyme disease; C3H/He mice, Isolation, Spain 39
Escherichia coli, Cell wall, Peptidoglycan, Murein, Sacculus; Models, Orientation, Elongation, Glycan chains, Tessera, Disaccharide pentapeptides; Review 689
Escherichia coli, CNF, Cattle; NTEC infections, Reservoirs, Serogroups 47
Escherichia coli, Colicin N, Porin; OmpF, Immunocytolocalization, Outer membrane, K^+ 645
Escherichia coli, Fimbriae; Type 1, Avian colibacillosis, Isogenic mutant, Pathogenicity 473
Escherichia coli, Food; O157:H7, VTEC, PCR, Ground beef, Detection 145
Escherichia coli, Ribotyping; Computer identification, Molecular epidemiology, Typing system, Serovars 119
Escherichia coli, Shiga toxin, PCR, Virulence; *stx* Genes, STEC, VTEC 457
Eucaryotic cell, *Salmonella typhimurium;* Proliferation, Non-phagocytic cells, Inhibition, Mouse model 309
Evolution, Biodiversity, *Mycobacterium tuberculosis;* DNA fingerprinting, IS*6110*, Spoligotyping, Combined numerical analyisis . . . 349
Fatty acids, *Halomonas salina,* Salt concentration 675
Fimbriae, *Escherichia coli;* Type 1, Avian colibacillosis, Isogenic mutant, Pathogenicity 473
Fish, PCR, *Flavobacterium psychrophilum;* Bacterial diseases, Identification 519
Flavobacterium psychrophilum, PCR, Fish; Bacterial diseases, Identification 519
Food, *Escherichia coli;* O157:H7, VTEC, PCR, Ground beef, Detection. 145
Fusobacterium, Antagonism, Bacteriocin, Mouth; Anaerobic bacteria, Antagonistic substances, Marmoset 585
Gene *priA, Borrelia burgdorferi,* Helicase, Gene *ruvAB;* Telomere, Replication, Recombination, Primosome 235
Gene *ruvAB, Borrelia burgdorferi,* Helicase, Gene *priA;* Telomere, Replication, Recombination, Primosome 235
Glycogen, *Thermus thermophilus,* α-Glucan phosphorylase; Metabolism, Growth cycle. 171
GroEL protein, Heat shock, *Lactobacillus helveticus;* Operon, Transcription, Lactic acid bacteria 247
H-NS protein, *virF* gene, pH, Temperature; Regulation, *Shigella,* EIEC, Bent DNA. 15
Halomonas eurihalina, Crystal, Biomineralization; Halophilic bacteria, Carbonates 277
Halomonas salina, Fatty acid, Salt concentration 675
Heat shock, GroEL protein, *Lactoba-*

cillus helveticus; Operon, Transcription, lactic acid bacteria 247
Helicase, *Borrelia burgdorferi,* Gene *priA*, Gene *ruvAB;* Telomere, Replication, Recombination, Primosome 235
Hospital, *Serratia marcescens;* Biotyping, Esterase typing, Ribotyping, Macrorestriction typing, Epidemiology, Nosocomial infections.. 137
Hydrophobicity, *Serratia marcescens,* Colonization; Pathogenicity, Mexico 27
Hyphomycete, *Scedosporium apiospermum,* Phenol, Cresol; Aromatic pollutants, Biodegradation, *p*-Cresol, *ortho*-Pathways 399
IgG, Virulence, *Streptococcus pyogenes,* Cysteine, Protease, M protein; IgG subclasses, M1 antigen .. 539
Immunoanalysis, *Mycoplasma* sp., Lipoprotein P67; Identification, Bovines, PCR 55
Iron, *Bordetella bronchoseptica, bfrB* gene, *bfrC* gene; Fur-repressed genes, TonB-dependent receptors, Tn*phoA* mutagenesis, Regulation 189
Iron, Transferrin, *Neisseria meningitidis;* FbpA, TbpA, TbpB ... 381
ITS region, *Pneumocystis carinii* sp. f. *hominis,* AIDS; Biotyping, Reinfection, Epidemiology 595
J protein, Bacteriophage lambda, LamB protein; Interactions, Mutations, Tail fibre 611
Kluyveromyces lactis, Amphotericin B; Resistance, Cell wall ... 109
Lactobacillus helveticus, Heat shock, GroEL protein; Operon, Transcription, lactic acid bacteria 247
Lactobacillus, rrn Operon, Spacer region, tRNA; PCR, Identification, Phylogenesis 433
Lactobacillus; Thermophilic lactobacilli, Dairy cultures, Taxonomy, Molecular identification, rDNA, rRNA, PCR, ARDRA-PCR, PCR fingerprinting 631
LamB protein, Bacteriophage lambda, J protein; Interactions, Mutations, Tail fibre 611
Lipoprotein P67, *Mycoplasma* sp., Immunoanalysis; Identification, Bovines, PCR 55
LPS, Porin, *Salmonella typhimurium,* Monocyte, Lymphocyte; Internalization 625
LPS, Virulence, *Aeromonas;* O serogroups from mesophilic strains, Osmolarity, Growth factors, *Enterobacteriaceae*..... 407
Lyme disease, *Borrelia garinii,* Erythema migrans; C3H/He mice, Isolation, Spain 39
Lymphocyte, Porin, LPS, *Salmonella typhimurium,* Monocyte; Internalization 625
Lytic cycle, Bacteriophage, *Arthrobacter aureus,* ApId; ΦAAU2, Early region 177
M protein, IgG, Virulence, *Streptococcus pyogenes.* Cysteine, Protease; IgG subclasses, M1 antigen .. 539
Methicillin, *Staphylococcus aureus;* Resistance, Genotyping, Evolution, Geographical dissemination .. 497
Monocyte, Porin, LPS, *Salmonella typhimurium,* Lymphocyte; Internalization 625
Mouth, Antagonism, *Fusobacterium,* Bacteriocin; Anaerobic bacteria, Antagonistic substances, Marmoset 585
Murein, Cell wall, Peptidoglycan, *Escherichia coli,* Sacculus; Models, Orientation, Elongation, Glycan chains, Tessera, Disaccharide pentapeptides; Review..... 689
Mycobacteriophage D29, Bacteriophage, Tuberculosis; Diagnosis, Latent period..... 487
Mycobacterium, Oxidoreductase system, Phylogeny 567
Mycobacterium bovis, BCG, Ribosome, O_2; α-Crystallin-like stress protein, Ribosomal binding protein, O_2 deficiency 255
Mycobacterium tuberculosis, BCG, Protein SA-5K; Secretion antigens, Molecular cloning 265
Mycobacterium tuberculosis, Biodiversity, Evolution; DNA fingerprinting, IS*6110*, Spoligotyping, Combined numerical analysis ... 349
Mycoplasma sp., Lipoprotein P67, Immunoanalysis; Identification, Bovines, PCR 55
Myxococcus xanthus, Endoglucanase; Extracellular enzymes, Regulation 319
Neisseria meningitidis, Transferrin, Iron; FbpA, TbpA, TbpB... 381
O_2, BCG, *Mycobacterium bovis,* Ribosome; α-Crystallin-like stress protein, Ribosomal binding protein, O_2 deficiency..... 255
Ochromonas danica, Biodegradation, Phenol; Cresols, Xylenols, Phenolic mixtures..... 65
Oligonucleotide probe, *Acinetobacter, Acinetobacter baumannii;* Identification..... 557
oriC, Streptomyces ambofaciens; Linear chromosome, Replication, PFGE 203
Orpinomyces joyonii, Cellulolysis, Anaerobiosis, Rumen, Endoglucanase, *Caecomyces communis;* Anaerobic fungi, β-glucosidase, YAS 417
Outer membrane, EC 3.1.1.32, Phospholipase A, *pldA* gene; Active site, Catalysis 703
Oxidoreductase system, *Mycobacterium,* Phylogeny 567
Oxyanion, Tellurite, Thermophilic bacterium; Reduction, Toxicity, Resistance, H1 and H2 fractions... 389
Pasteurella multocida, Phosphotransferase system; Catabolic pathways, Glucose, Mannose 83
PCR, Atherosclerosis, DNA; Tissue detection, *Chlamydia pneumoniae,* Cytomegalovirus, Herpes simplex virus 577
PCR, *Flavobacterium psychrophilum,* Fish; Bacterial diseases, Identification..... 519
PCR, *Salmonella;* Molecular identification, H1 antigenic complex, *fljB* genes, Multiplex PCR 757
PCR, Shiga toxin, Virulence, *Escherichia coli; stx* Genes, STEC, VTEC 457
Peptidoglycan, Cell wall, *Escherichia coli,* Murein, Sacculus; Models, Orientation, Elongation, Glycan chains, Tessera, Disaccharide pentapeptides; Review 689
pH, *virF* gene, H-NS protein, Temperature; Regulation, *Shigella,* EIEC, Bent DNA..... 15
Phenol, Hyphomycete, *Scedosporium apiospermum,* Cresol; Aromatic pollutants, Biodegradation, *p*-Cresol, *ortho*-Pathways 399
Phenol, *Ochromonas danica,* Biodegradation; Cresols, Xylenols, Phenolic mixtures 65
Phospholipase A, EC 3.1.1.32, Outer membrane, *pldA* gene; Active site, Catalysis 703
Phosphotransferase system, *Pasteurella multocida;* Catabolic pathways, Glucose, Mannose ... 83
Phylogeny, Oxidoreductase system, *Mycobacterium* 567
Plasmid, Electrotransformation, *Azotobacter vinelandii,* Electroporation; Marker gene, Chromosal integration, Symbiosis..... 361
pldA gene, EC 3.1.1.32, Outer membrane, Phospholipase A; Active site, Catalysis 703
Pneumocystis carinii sp. f. *hominis,* ITS region, AIDS; Biotyping, Reinfection, Epidemiology.. 595
Porin, Colicin N, *Escherichia coli;* OmpF, Immunocytolocalization, Outer membrane, K^+ 645
Porin, LPS, *Salmonella typhimurium,* Monocyte, Lymphocyte; Internalization 625
Potato, Scab, *Streptomyces;* Common and netted scab, Biotype-100 strips, Taxonomy, Numerical analysis 653

Protease, IgG, Virulence, *Streptococcus pyogenes,* Cysteine, M protein; IgG subclasses, M1 antigen 539
Protein SA-5K, *Mycobacterium tuberculosis,* BCG; Secretion antigens, Molecular cloning 265
Pseudomonas, Chlorobenzoic acid, Catechol, Chlorocatechol; Biodegradation, Catabolic genes .. 339
Replication, Transposition; IS*231*A, *Bacillus subtilis* 549
Ribosome, BCG, *Mycobacterium bovis,* O_2; α-Crystallin-like stress protein, Ribosomal binding protein, O_2 deficiency 255
Ribotyping, *Escherichia coli;* Computer identification, Molecular epidemiology, Typing system, Serovars 119
rrn Operon, *Lactobacillus,* Spacer region, tRNA; PCR, Identification, Phylogenesis 433
Rumen, Anaerobiosis, Cellulolysis, Endoglucanase, *Caecomyces communis, Orpinomyces joyonii;* Anaerobic fungi, β-glucosidase, YAS.... 417
Sacculus, Cell wall, Peptidoglycan, *Escherichia coli,* Murein; Models, Orientation, Elongation, Glycan chains, Tessera, Disaccharide pentapeptides; Review 689
Salmonella; Serovars, Taxonomy, Kauffmann-White schema .. 601
Salmonella bongori, Diarrhoea, Child; Italy, Serovar 48:z35:-, Reptiles 429
Salmonella typhimurium, Eucaryotic cell ; Proliferation, Non-phagocytic cells, Inhibition, Mouse model 309
Salmonella typhimurium, Porin, LPS, Monocyte, Lymphocyte; Internalization 625
Salmonella, PCR; Molecular identification, H1 antigenic complex, *fljB* genes, Multiplex PCR 757
Salt concentration, Fatty acid, *Halomonas salina* 675
Scab, *Streptomyces,* Potato; Common and netted scab, Biotype-100 strips, Taxonomy, Numerical analysis 653
Scedosporium apiospermum, Hyphomycete, Phenol, Cresol; Aromatic pollutants, Biodegradation, *p*-Cresol, *ortho*-Pathways 399
Serratia marcescens, Hospital; Biotyping, Esterase typing, Ribotyping, Macrorestriction typing, Epidemiology, Nosocomial infections .. 137
Serratia marcescens, Hydrophobicity, Colonization; Pathogenicity, Mexico 27
Shiga toxin, PCR, Virulence, *Escherichia coli; stx* Genes, STEC, VTEC 457
Sludge, Biodegradation, *Acinetobacter,* Intraspecific variability, Molecular fingerprinting, ARDRA, RAPD 665
Spacer region, *Lactobacillus, rrn* Operon, tRNA; PCR, Identification, Phylogenesis 433
Staphyloccoccus epidermidis, AFLP™; Blood culture, Coagulase-negative staphylococci, Strain identification, Epidemiology 221
Staphylococcus aureus, Methicillin; Resistance, Genotyping, Evolution, Geographical dissemination 497
Streptococcus pneumoniae, Virulence, Calcium; Transport, Genetic exchanges, Autolysis 5
Streptococcus pyogenes, IgG, Virulence, Cysteine, Protease, M protein; IgG subclasses, M1 antigen .. 539
Streptomyces ambofaciens, oriC; Linear chromosome, Replication, PFGE 203
Streptomyces, Scab, Potato; Common and netted scab, Biotype-100 strips, Taxonomy, Numerical analysis 653
Tellurite, Oxyanion, Thermophilic bacterium; Reduction, Toxicity, Resistance, H1 and H2 fractions ... 389
Temperature, *virF* gene, H-NS protein, pH; Regulation, *Shigella,* EIEC, Bent DNA 15
Thermophilic *Bacillus;* ARDRA, ARDRA-ITS, RAPD, RSA, DNA-DNA homology, Identification 711
Thermophilic bacterium, Tellurite, Oxyanion; Reduction, Toxicity, Resistance, H1 and H2 fractions ... 389
Thermus thermophilus, α-Glucan phosphorylase, Glycogen; Metabolism, Growth cycle 171
Transferrin, Iron, *Neisseria meningitidis;* FbpA, TbpA, TbpB... 381
Transposition, Replication; IS*231A, Bacillus subtilis* 549
Trichoderma harzianum, Chitin, *Verticillium lecanii;* Low temperature, Chitinolytic activity, Antifungal action 289
tRNA, *Lactobacillus, rrn* Operon, Spacer region; PCR, Identification, Phylogenesis 433
Tuberculosis, Bacteriophage, Mycobacteriophage D29; Diagnosis, Latent period 487
Verticillium lecanii, Chitin, *Trichoderma harzianum;* Low temperature, Chitinolytic activity, Antifungal action 289
Vibrio cholerae, Cholera; Toxin, Ribotyping, PCR, Molecular characterization, Romania 745
virF gene, H-NS protein, pH, Temperature; Regulation, *Shigella,* EIEC, Bent DNA 15
Virulence, IgG, *Streptococcus pyogenes,* Cysteine, Protease, M protein; IgG subclasses, M1 antigen .. 539
Virulence, LPS, *Aeromonas;* O serogroups from mesophilic strains, Osmolarity, Growth factors, *Enterobacteriaceae* 407
Virulence, Shiga toxin, PCR, *Escherichia coli; stx* Genes, STEC, VTEC 457
Virulence, *Streptococcus pneumoniae,* Calcium; Transport, Genetic exchanges, Autolysis 5

INDEX OF ARTICLES PUBLISHED

Pleiotropic mutations alter the kinetics of calcium transport, competence regulation, autolysis and experimental virulence in *Streptococcus pneumoniae,* E. AZOULAY-DUPUIS, V. RIEUX, C. RIVIER and M.-C. TROMBE 5
A role for H-NS in the regulation of the *virF* gene of *Shigella* and enteroinvasive *Escherichia coli,* G. PROSSEDA, P.A. FRADIANI, M. DI LORENZO, M. FALCONI, G. MICHELI, M. CASALINO, M. NICOLETTI and B. COLONNA 15
Superficial hydrophobicity in *Serratia marcescens* strains of clinical origin, R. CORIA-JIMÉNEZ, J. ROMERO-OLVERA and C. CELIS-CRUZ .. 27
Arguments against the involvement of *Borrellia burgdorferi* sensu lato in Alzheimer's disease, M. GUTACKER, C. VALSANGIACOMO, T. BALMELLI, M.V. BERNASCONI, C. BOURAS and J.-C. PIFFARETTI 31
Use of the C3H/He Lyme disease mouse model for the recovery of a Spanish isolate of *Borrelia garinii* from erythema migrans lesions, J.A. OTEO, P.B. BACKENSON, M. DEL MAR VITUTIA, J.C. GARCÍA MONCÓ, I. RODRÍGUEZ, R. ESCUDERO and P. ANDA 39
Prevalence and characteristics of necrotoxigenic *Escherichia coli* $CNF1^+$ and $CNF2^+$ in healthy cattle, M. BLANCO, J.E. BLANCO, A. MORA and J. BLANCO 47
Genetic and serological analysis of the immunogenic 67-kDa lipoprotein of *Mycoplasma* sp. bovine group 7, J. FREY, X. CHENG, M.-P. MONNERAT, E.-M. ABDO, M. KRAWINKLER, G. BÖLSKE and J. NICOLET 55
Heterophic growth on phenolic mixtures by *Ochromonas danica,* K.T. SEMPLE 65
Transport of glucose by a phosphoenolpyruvate:mannose phosphotransferase system in *Pasteurella*

multocida, M.R.B. Binet and O.M.M. Bouvet 83
Characterization and gene sequencing of a 19-kDa periplasmic protein of *Campylobacter jejuni/coli*, B. Janvier, C. Constantinidou, P. Aucher, Z.V. Marshall, C.W. Penn and J.L. Fauchère 95
Implication of cell wall constituents in the sensitivity of *Kluyveromyces lactis* strains to amphotericin B, E. Ramanandraibe, M. Younsi, J. Coulon, V. Loppinet, A. Hakkou and R. Bonaly 109
Computer identification of *Escherichia coli* rRNA gene restriction patterns, J. Machado, F. Grimont and P.A.D. Grimont 119
Typing of nosocomial strains of *Serratia marcescens:* comparison of pulsed-field gel electrophoresis of macrorestriction fragments with biotyping, esterase typing and ribotyping, H. Chetoui, E. Delhalle, P. Melin, M.J. Struelens, R. De Ryck, P. Osterrieth and P. De Mol 137
PCR-based detection of verotoxin-producing *Escherichia coli* (VTEC) in ground beef, M. Gilgen, P. Hübner, C. Höfelein, J. Lüthy and U. Candrian 145
Protein and peptide secretion by ABC exporters, C. Wandersman .. 163
Growth dependence of α-glucan phosphorylase activity in *Thermus thermophilus*, B. Boeck and R. Schinzer 171
Cloning and sequence determination of a ΦAAU2 gene whose product aborts the phage lytic cycle, C. Le Marrec, S. Moreau, V. Leret, A. Schäffer, C. Blanco and A. Trautwetter 177
Two iron-regulated putative ferric siderophore receptor genes in *Bordella bronchiseptica* and *Bordetella pertussis*, B. Beall 189
Replication of the linear chromosomal DNA from the centrally located *oriC* of *Streptomyces ambofaciens* revealed by PFGE gene dosage analysis, G. Fischer, A.C. Holl, J.N. Volff, D. Vandewiele, B. Decaris and P. Leblond 203
Carnitine acts as a compatible solute in *Brevibacterium linens*, M. Jebbar, C. Champion, C. Blanco and S. Bonnassie 211
AFLP™ typing of *Staphylococcus epidermidis* in multiple sequential blood cultures, J.H. Sloos, P. Janssen, C.P.A. van Boven and L. Dijkshoorn 221
Homologues of helicase genes *priA* and *ruvAB* of *Borrelia burgdorferi*, the Lyme borreliosis agent, C. Boursaux-Eude, D. Margarita, J. Belfaiza, I.G. Old and I. Saint Girons 235
Characterization of the *Lactobacillus helveticus groESL* operon, J.R. Broadbent, C.J. Oberg and L. Wei .. 247
The 16-kDa α-crystallin-like protein of *Mycobacterium bovis* BCG is produced under conditions of oxygen deficiency and is associated with ribosomes, Y. Tabira, N. Ohara, N. Ohara, H. Kitaura, S. Matsumoto, M. Naito and T. Yamada 255
Identification and molecular cloning of a novel secretion antigen from *Mycobacterium tuberculosis* and *Mycobacterium bovis* BCG, G.Freer, W. Florio, B. Dalla Casa, D. Bottai, G. Batoni, G. Maisetta, S. Senesi and M. Campa 265
Biomineralization of carbonates by *Halomonas eurihalina* in solid and liquid media with different salinities: crystal formation sequence, M.A. Rivadeneyra, G. Delgado, A. Ramos-Cormenzana and R. Delgado 277
Chitinolytic activity at low temperature of an Antarctic strain (A3) of *Verticillium lecanii*, M. Fenice, L. Selbmann, R. Di Giambattista and F. Federici 289
Inhibition of *Salmonella* intracellular proliferation by non-phagocytic eucaryotic cells, M. Martínez-Moya, M.A. De Pedro, H. Schwarz and F. García-Del Portillo 309
Regulation of the expression of a gene encoding β-endoglucanase secreted by *Myxococcus xanthus* during growth: role of genes involved in developmental regulation, L. Bensmail, L. Quillet, F. Petit, S. Barray and J.F. Guespin-Michel 319
Reaggregation and binding of cell wall proteins from *Candida albicans* to structural polysaccharides, C. Aguado, J. Ruíz-Herrera, M. Iranzo, R. Sentadreu and S. Mormeneo 327
Characterization of catechol- and chlorocatechol-degrading activity in the ortho-chlorinated benzoic acid-degrading *Pseudomonas* sp. CPE2 strain, D. Di Gioia, F. Fava, F. Baldoni and L. Marchetti 339
Combined numerical analysis based on the molecular description of *Mycobacterium tuberculosis* by four repetitive sequence-based DNA typing systems, C. Sola, L. Horgen, A. Devallois and N. Rastogi 349
Stable electrotransformation of symbiont candidate diazotrophic bacterium with plasmids carrying selectable and screenable marker genes, P. Korányi, K. Burg and M. Berényi 361
Cooperation between the components of the meningococcal transferrin receptor, TbpA and TbpB, in the uptake of transferrin iron by the 37-kDa ferric-binding protein (FbpA), J.A. Gómez, M.T. Criado and C.M. Ferreirós 381
Biochemical characterization of tellurite-reducing activities of *Bacillus stearothermophilus* V, H. Moscoso, C. Saavedra, C. Loyola, S. Pichuantes and C. Vásquez .. 389
Biodegradation of phenol and *p*-cresol by the hyphomycete *Scedosporium apiospermum*, M. Claussen and S. Schmidt 399
Mesophilic *Aeromonas* strains from different serogroups: the influence of growth temperature and osmolarity on lipopolysaccharide and virulence, S. Merino, A. Aguilar, X. Rubires and J.M. Tomás. ... 407
Cellulolytic enzymes of rumen anaerobic fungi *Orpinomyces joyonii* and *Caecomyces communis*, B. Hodrová, J. Kopečný and J. Kás 417
Endemic presence of *Salmonella bongori* 48:z35:- causing enteritis in children in Sicily, S. Pignato, G. Giammanco, C. Santangelo and G.M. Giammanco 429
16S-23S and 23S-5S intergenic spacer regions of lactobacilli: nucleotide sequence, secondary structure and comparative analysis, M. Nour 433
Comparison of 14 PCR systems for the detection and subtyping of *stx* genes in Shiga-toxin-producing *Escherichia coli*, S.N. Bastian, I. Carle and F. Grimont 457
Colonization ability and pathogenic properties of a *fim*⁻ mutant of an avian strain of *Escherichia coli*, D. Marc, P. Arné, A. Brée and M. Dho-Moulin 473
Inactivation of mycobacteriophage D29 using ferrous ammonium sulphate as a tool for the detection of viable *Mycobacterium smegmatis* and *M. tuberculosis*, R. McNerney, S.M. Wilson, A.M. Sidhu, V.S. Harley, Z. Al Suwaidi, P.M. Nye, T. Parish and N.G. Stoker 487
Genetic diversification of methicillin-resistant *Staphylococcus aureus* as a function of prolonged geographic dissemination and as measured by binary typing and other genotyping methods, W. van Leeuwen, A. van

BELKUM, B. KREISWIRTH and H. VERBRUGH 497
Differentiation of *Brucella melitensis, B. ovis* and *B. suis* biovar 2 strains by use of membrane protein- or cytoplasmic protein-specific gene probes, J.M. VERGER, M. GRAYON, A. TIBOR, V. WANSARD, J.J. LETESSON and A. CLOECKAERT 509
Development of a polymerase chain reaction assay for identification and detection of the fish pathogen *Flavobacterium psychrophilum,* M.C. URDACI, C. CHAKROUN, D. FAURE and J.-F. BERNADET 519
A secreted streptococcal cysteine protease can cleave a surface-expressed M1 protein and alter the immunoglobulin binding properties, R. RAEDER, M. WOISCHNICK, A. PODBIELSKI and M.D. BOYLE 539
IS*231A* transposition: conservation versus replicative pathway, C. LÉONARD and J. MAHILLON 549
Characterization of oligonucleotide probes for the identification of *Acinetobacter* spp., *A baumannii* and *Acinetobacter* genomic species 3, C. LAGATOLLA, A. LAVENIA, E. TONIN, C. MONTI-BRAGADIN and L. DOLZANI 557
Molecular characterization of the thioredoxin system of *Mycobacterium smegmatis,* R.L. ASANO and J. DAVIES 567
Detection of microorganisms in vessel wall specimens of the abdominal aorta: development of a PCR assay in the absence of a gold standard, A. MEIJER, J.A. VAN DER VLIET, L.M. SCHOULS, A. DE VRIES, P.J.M. ROHOLL and J.M. OSSEWAARDE 577
Bacteriocin production by *Fusobacterium* isolates recovered from the oral cavity of human subjects with and without periondontal disease and of marmosets, A.A.P. OLIVEIRA, L.M. FARIAS, J.R. NICOLI, J.E. COSTA and M.A.R. CARVALHO 585
Typing with internal transcribed spacer regions of *Pneumocytis carinii* from AIDS patients with recurrent pneumonia, P. MARGUTTI, E. VISCONTI, P. MENCARINI, M. ZOLFO, S. MARINACI, E. TAMBURRINI, A. SIRACUSANO and E. ORTONA 595
Supplement 1997 (n° 41) to the Kauffmann-White scheme, M.Y. POPOFF, J. BOCKMÜHL and F.W. BRENNER 601
Cloning of the *J* gene of bacteriophage lambda, expression and solubilization of the J protein: first *in vitro* studies on the interactions between J and LamB, its cell-surface receptor, J. WANG, V. MICHEL, M. HOFNUNG and A. CHARBIT . . . 611
Salmonella typhimurium porin internalization by leukocytes, M. GALDIERO, F. BRANCACCIO, C. NAZZARO and L. DE MARTINO 625
Molecular identification and cluster analysis of homofermentative thermophilic lactobacilli isolated from dairy products, C. ANDRIGHETTO, P. DE DEA, A. LOMBARDI, E. NEVIANI, L. ROSSETTI and G. GIRAFFA . . 631
Colicin N interaction with sensitive *Escherichia coli* cells: *in situ* and kinetic approaches, R. EL KOUHEN, A. BERNADAC and J.-M. PAGÈS 645
Streptomyces species isolated from potato scabs in France: numerical analysis of "Biotype-100" carbon source assimilation data, K. BOUCHEK-MECHICHE, C. GUÉRIN, B. JOUAN and L. GARDAN 653
Biodiversity of an *Acinetobacter* population isolated from activated sludge, C. BARBERIO and R. FANI 665
Influence of salt concentration on the cellular fatty acid composition of the moderately halophilic bacterium *Halomonas salina.,* M.J. VALDERRAMA, M. MONTEOLIVA-SANCHEZ, E. QUESADA and A. RAMOS-CORMENZANA 675
Orientation of the peptidoglycan chains in the sacculus of *Escherichia coli.,* A.L. KOCH 689
Sequence comparison of outer membrane phospholipases A: implications for structure and for the catalytic mechanism, R.G.P.M. BROK, A.P. BOOTS, N. DEKKER, H.M. VERHEIJ and J. TOMMASSEN . . 703
Genotypic characterization of thermophilic bacilli: a study on new soil isolates and several reference strains, D. MORA, M.G. FORTINA, G. NICASTRO, C. PARINI and P.L. MANACHINI 711
A putative adhesin gene cloned from *Campylobacter jejuni,* K. KELLE, J.-M. PAGES and J.-M. BOLLA 723
AFLP allows the identification of genomic markers of ruminant *Chlamydia psittaci* strains useful for typing and epidemiological studies, K. SIDI BOUMEDINE and A. RODOLAKIS 735
Molecular characterization of *Vibrio cholerae* O1 strains isolated in Romania, M. DAMIAN, S. KOBLAVI, I. CARLE, N. NACESCU, F. GRIMONT, C. CIUFECU and P.A.D. GRIMONT 745
Rapid identification of *Salmonella* spp. phase 2 antigens of the H1 antigenic complex using "multiplex PCR", M.A. ECHEITA and M.A. USERA 757

BOOKS RECEIVED

RAI, A.K. — *Cyanobacterium nitrogen metabolism and environmental biotechnology* 75
SHAPIRO, J.A. & DWORKIN, M. — *Bacteria as multicellular organisms* 155
VOGT, P.K. & MAHAN, M.J. — *Bacterial infection: close encounters at the host-pathogen interface* . . 301
HORAUD, T., BOUVET, A., LECLERCQ, R., de MONTCLOS, H. & SICARD, M. — *Streptococci and the host* . . . 301
JAROSZESKI, M.J. & HELLER, R. — *Flow cytometry protocols, (Methods in Molecular Biology,* vol. 91) . . 373
LASSNER, D. PUSTOWOIT, B. & ROLFS, A. — *Modern applications of DNA amplification techniques, problems and new tools* 373
DRASAR, B.S. & FORREST, B.D. — *Cholera and the ecology of* Vibrio cholerae 373
COLONNA-ROMANO, S., LEONE, A. & MARESCA, B. — *Differential-display reverse transcription-PCR (DDRT-PCR).* 449
REISCHL, U. — *Molecular diagnosis of infectious disease: methods and protocols* 449
LAROSSA, R.A. — *Bioluminescence methods and protocols, (Methods in Molecular Biology,* vol. 102) 531
VARMA, A. — *Mycorrhiza manual* 531